CLAIMS:

1. A method for transmitting data units (DATA) by way of a transmission medium (204) that comprises at least three adjacent transmission lines (204_1-204_k), the method having the following steps:

(a) supplying a plurality of codes (SD), each code (SD) comprising a number of code sections (SD_0-SD_k) that corresponds to the number of transmission lines (204_1- 204_k) of the transmission medium, each code section (SD_0-SD_k) of a code (SD) on an associated transmission line (204_1-204_k) having a predetermined signal value, and the sum of the signal values being substantially constant for each transmitted code (SD);

(b) for each data unit (DATA) to be transmitted, selection of a code (SD) from the plurality of codes; and

(c) supplying the selected code (SD) for a transmission by way of the transmission medium (204).

2. A method as claimed in claim 1, in which the data units (DATA) and the codes (SD) to be transmitted are supplied in accordance with a predetermined clock pulse (CLK), wherein in step (b) at each new clock pulse (CLK) a new code (SD_{next}) is selected, based on the preceding code (SD_{last}) and the new data unit (DATA).

3. A method as claimed in claim 1 or 2, in which the code (SD) is a binary code, each of the codes (SD) comprising the same number of code sections with a high logic level and code sections with a low logic level.

4. A method as claimed in claim 3, in which a data unit (DATA) comprises one bit or a plurality of bits.

5. A method as claimed in any one of claims 1 to 4, in which the sum of the signal values is substantially zero.

6. A device for transmitting data units (DATA) by way of a transmission medium (204) that comprises at least three adjacent transmission lines (204_1-204_k), having

- an input for receiving the data units (DATA);
- a memory (226), in which a plurality of codes (SD) is stored, each code (SD) comprising a number of code sections (SD_0-SD_k) that corresponds to the number of transmission lines (204_1-204_k) of the transmission medium, each code section of a code on an associated transmission line having a predetermined signal value, and the sum of the signal values being substantially constant for each transmitted code (SD);
- a selection device, which is actively connected with the input and the memory in order to select and supply from the memory (226) a code for a data unit (DATA) received at the input; and
- an output that is actively connected with the selection device in order to supply the code (SD) supplied by the same for a transmission by way of the transmission medium (204).

7. A device as claimed in claim 6, with a clock input (CLK) for receiving a clock pulse, a data unit appearing at the input at each new clock pulse, and the selection device selecting and supplying, on the basis of the preceding code (SD_{last}) and a new data unit, a new code (SD_{next}) for the new clock pulse.

8. A method for receiving data units by way of a transmission medium (204) that comprises at least three adjacent transmission lines (204_1-204_k), the data units having been sent in accordance with a method as claimed in claims 1 to 5, the method comprising the following steps:

(a) receiving the transmitted codes (SD) transmitted on the transmission medium (204);

(b) assigning the received codes to the appropriate data units; and

(c) outputting the data units.

9. A method as claimed in claim 8, comprising the following step

- recovery of a clock signal based on transitions of the codes (SD) transmitted by way of the transmission medium (204).

10. A device for receiving data units from a transmission medium (204) that comprises at least three adjacent transmission lines (204_1-204_k), the data units being sent by a device as claimed in claim 6 or 7, having

- an input for receiving the codes from the transmission medium (204);
- an arrangement for assigning the received codes to the corresponding data units; and
- an output for outputting the data units.

11. A device as claimed in claim 10, having a timing recovery circuit (242) for recovering a clock signal based on transitions of the codes (SD) transmitted by way of the transmission medium (204).

12. A method for transmitting data units by way of a transmission medium (204) having at least three adjacent transmission lines (204_1-204_k), the method comprising the following steps:

- transmitting the data units in accordance with a method as claimed in any one of claims 1 to 5; and
- receiving the data units in accordance with a method as claimed in claim 8 or 9.

13. A device for transmitting data units, having

- a device for transmitting data units as claimed in claim 6 or 7;
- a transmission medium (204) that is actively connected with the device for transmitting and has at least three adjacent transmission lines (204_1-204_k); and
- a device actively connected with the transmission medium (204) for receiving data units as claimed in claim 10 or 11.